NATIONAL IMAGINATION COMPUTER CLUB

* 515 Shadylane-Barrington-Illinois-60010

MAY 1982

Here we are again. If you have sent in questions, just hangon, we are working on answers. If you wish to contact/be contacted by other members, just write us and we will publish your name and address, also if you have any particular reason to be contacted, just let us know, that will also be listed. If you have something to sell, we need to put a limit on them to one item per member. Also, since there is alot of computer mail coming in to the shop, please label you envelope "Imagination Computer Club" this will help the mail openers to place it in the correct bin and not causing a delay in it reaching us, "NICC" will NOT help, it must be "Imagination Computer Club". Thank you.

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ANSWERS/TIPS FROM OTHER CLUB MEMBERS

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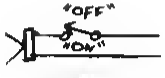
FROM TED HINES OF VIRGINIA

For those of you who received the premier issue of the newsletter and were interested in the poke statement for removing the buzzing. Mr. Hines has done the following to be rid of the buzzing permanently. A SPST switch from Radio Shack was installed in series with one of the speaker leads as seen below. If you have any questions, just let us know and we will publish a request for more information.

BEFORE MOD



AFTER MOD

Many of you (including Mr. Hines) have expressed a desire to place a loan payment calculation on the APF, if anyone has done so, send the program and we will publish it (unless we come up with one first.)

FROM MICHAEL E. DAVIS OF OHIO

For all of us who have requested books/help with the 6800 machine language, here are a few tips and recommendations:

USING THE 6800 MICROPROCESSOR

WRITTEN BY ELMER POE published by Howard W. Sams & Co., Inc.

and

HOW TO PROGRAM AND INTERFACE THE 6800

WRITTEN BY ANDREW C. STANGAARD, JR. published by (same)

source: Priority One Electronics
9161 Deering Avenue
Chatsworth, CA 91311

The first book is rather simple. The second book is interesting and includes machine language programs and exercises that work well on the APF machine.

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ITEMS FOR SALE

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DUKDOM - You are the ruler of a country in the middle ages. You must lead your people through 22 years, with wars and famines. While doing this, you must keep up the population, land and grain.

FISH - The card game of Fish with the computer. First to get rid of all of their cards in books wins.

DUKDOM & FISH - $10.95 SEND CHECK OR MONEY ORDER

ORDER FROM: Larry Greenfield (714) 842-7876
17300 Santa Clara
Fountain Valley, CA 92708

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PROGRAMS FROM OTHER CLUB MEMBERS

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CHECKBOOK

.....from Christopher Phillips of CA

This program maintains your checkbook balance. lines 1 and 2 are used to create a screen when saved to tape. When you run it the first time, you can enter 0 and then CSAVE the program. It will the cload the title page, otherwise you can eliminate lines 1,2 3 and 3. Also, thank you Mr. Phillips for all of the compliments to APF in your letter. Someone's head probably doesn't fit into a doorway anymore.

```
1  FOR I=1 TO 12: NEXT I: REM     CLEAR SCREEN-ALL GREEN
2  PRINT ,"CHECKBOOK": PRINT : PRINT : PRINT "BY CHRIS PHILLIPS": PRINT : PRINT
3  INPUT A: IF A=0 THEN 150: REM     INPUT NUMBER TO STTART PROGRAM
5  CALL 17046: POKE 24578,38: REM     CLEAR SCREEN, TURN OFF TAPE
10  DIM A$(32): REM     USE STRING FOR FORMAT
12 A$="## $$####,###.## $$####,###.##"
15  INPUT "BALANCE",B
20  INPUT "CHECK",A
21 B=B-A: REM     SUBTRACT CHECK, ENTER DEPOSITS AS A NEGATIVE AMOUNT
22  IF A=0 THEN 150
25  IF A<0 THEN 60
30  PRINT  USING A$,"CK",A,B
50  GOTO 20
60  PRINT  USING A$,"DP",A,B
80  GOTO 20
150  END
```

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SHAPE TO MUSIC

.....from DENNIS PERRY of New Jersey

This program was written to help clubmembers to understand the shape table and color for low graphics. Mr. Perry added music to jazz it up. Note that were it is stated - 12 sp - the hyphens are not included in the program, that is just to tell you how many spaces are between the numbers.

SHAPE TO MUSIC (continued)

```
5  CALL 17046
10  PRINT "CHOSE SHAPE 1 TO 15 FOR A, INPUT A AND PRESS RETURN"
20  INPUT "NUMBER 1 TO 15 FOR A=",A
30  IF A=0 GOTO 20
40  IF A>15 GOTO 20
50  SHAPE =A: CALL 17046
60  POKE 745,03: POKE 746,15: POKE 747,12: POKE 748,15: POKE 749,18: POKE 750,05
: POKE 751,04
70  POKE 753,13: POKE 754,21: POKE 755,19: POKE 756,09: POKE 757,03
80  FOR I=0 TO 6
90  IF I=1 MUSIC "100"
100  IF I=2 MUSIC "200"
110  IF I=3 MUSIC "300"
120  IF I=4 MUSIC "400"
130  IF I=5 MUSIC "500"
140  IF I=6M MUSIC "600 — 12 SP. — 700"
150  FOR P=1 TO 100: NEXT
160  COLOR =1
170  HLIN I,31-I,I
180  HLIN I,31-I,15-I
190  VLIN I,15-I,I
200  VLIN I,15-I,31-I
210  NEXT I: MUSIC C"600 - 12SP. - 500 - 12SP - 400 - 12SP - 300 - 12 SP -
 200 - 12 SP — 100"
220  GOTO 20
```

****

NAME & ADDRESS
.....from GREG LONGFIELD

Enter the address or names in the form as shown above. Yo do Aot need a printer, when it asks to "position paper and turn printer on", just hit return. it will print on the screen. Also, please note the rem statements in 320 and 330 before adding any names of your own.

NAME & ADDRESS (continued)

```
10  POKE 24578,54: CALL 34061
20  CALL 17046: POKE 40960,2: POKE 40961,0
30 N=35000
40  DIM G$(30)
50  REM     - ENTRY OR NUMBERS TO PRINT
140  READ N2
150  PRINT "POSITION PAPER & TURN PRINTER ON"
160  INPUT "PRESS RETURN",G$
170  FOR I=1 TO N
180  READ N1
190  IF N1=0 THEN 300
200  FOR J=1 TO N1
205 G$="     ---- 30 sp ---      "
210  READ G$
220  PRINT G$
230  NEXT J
240  IF N1>=N22 THEN 280
250  FOR K=N1 TO N2
260  PRINT
270  NEXT K
280  NEXT I
290  REM     TERMINATION
300  PRINT I-1;"RECORDS WERE PRINTED"
310  STOP
320  REM     LINE 999 CONTINS # OF LINES FOR PAGE MOVEMENT
330  REM     LINE 1000 AND 1004 CONTAINS THE # OF LINES IN THE ADDRESSES
999  DATA 2
1000  DATA 3
1001  DATA "JOHN DOE"
1002  DATA "555 SMOKEY DRIVE"
1003  DATA "GROVERVILLE, IL 69999"
1004  DATA 2
1005  DATA "BOX 515 N CHICAGO STREET"
1007  DATA "BILL SMITH"
1008  DATA 0
```

****

FINPUTERS

.....from RICK CARMAN

The following program illustrates how to effectively use READ-DATA. Mr. Carman stated that his computer gets fouled up on the spacing if a word in the data statement contains a keyword. He therefore invented the words in the program to illustrate this. I have changed his program by adding the quotation marks. These seemed to space the words exactly as I had typed the data statements. However, it appears this did not help Mr. Carman all of the time. If anyone else has this problem, please let us know.

FINPUTERS (continued)

```
10  DIM A$(1),B$(70),NULL$(70)
20  READ A$,B$
30  IF B$="END" THEN  STOP
40  PRINT B$
45 A$=NULL$
47 B$=NULL$
50  GOTO 20
60  DATA "THIS IS ABOUT FINPUTERS AND BOGOTONIANS"
65  DATA "FINPUTERS ARE POPULAR IN BOGOTONIA."
70  DATA "BOGOTONIANS LOVE THEIR FINPUTERS."
75  DATA "BOGOTONIANS GIVE THEIR FINPUTERS NAMES...LIKE EYEMARD."
76  DATA "BLISTOM - A BOGOTONIAN HAS A FINPUTER"
80  DATA ,END
```

****

STR$ EMULATOR
from RUSSELL LETSON OF MN

You may find the next couple of programs useful as subroutines. Their usefulness for Mr. Letson is in packing and unpacking data for disk files.

```
10  REM   A STR$(N) EMULATOR FOR INTEGERS UP TO 5 DIGITS
20  DIM N$(4),NU$(6),X(4): REM   N$=OUTPUT STRING;NU$=NULL STRING
7000  REM   MAIN LOOP COUNTS N$(I) UP AND X(J) DOWN.  T=A POWER OF 10
7050  INPUT N
7075 I=0
7100  IF N>9999 THEN J=4:T=10000: GOTO 7200
7110  IF N>999 THEN J=3:T=1000: GOTO 7200
7120  IF N>99 THEN J=2:T=100: GOTO 7200
7130  IF N>9 THEN J=1:T=10: GOTO 7200
7140  IF N<10 THEN J=0:X(J)=N: GOTO 7500
7200 X(J)= INT (N/T): REM   X=DIGIT FOR POSITION J
7300 N=N-X(J)*T: REM   N=REMAINDER FOR NEXT DIGIT
7400  IF T>=10 THEN T=T/10
7500 N$(I)= CHR$ (X(J)+48): REM   PUT DIGIT INTO N$ AT POSITION I
7550 I=I+1
7600 J=J-1
7610  IF J<0 THEN 7700
7620  GOTO 7200
```

STR$ EMULATOR (continued)

```
7700  PRINT N$: REM   OR OUTPUT TO MAIN PROGRAM
7750 N$=NU$
7800  GOTO 7050
7801  REM   INELEGANT BUT MINE OWN--RUSSELL LETSON 4/82
```

VAL EMULATOR

```
10  REM   A VAL(A$) EMULATOR GOOD FOR 5-DIGIT NUMBERS (UP TO 99999)
15  REM    ADAPT AND USE AS A SUBROUTINE
8000  DIM A$(4),NU$(6),X(4): REM    A$=INPUT STRING, NU$=NULL STRING
8100  INPUT A$
8500 J=0
8505  FOR I=0 TO 4:X(I)=0: NEXT I: REM    CLEAR X'S
8507  REM    MAIN LOOP TURNS STRING DIGITS INTO NUMBERS
8508  REM   X(I) COUNTS DOWN; A$(J) COUNTS UP; X(I)=NUMERICAL EQUIV. OF DISIT
8510  FOR I= LEN (A$)-1 TO 0 STEP -1
8520 X(I)= ASC (A$(J))-48
8530 J=J+1
8535  NEXT I
8536  REM   CALCULATE N
8540 N=10000*X(4)+1000*X(3)+100*X(2)+10*X(1)+X(0)
8550  PRINT N
8555 A$=NU$: REM   CLEAR A$ TO NULLS
8570  GOTO 8100
8580  REM    RUSSELL LETSON 4/82
```

****

DICE

.....from BERNARD SAMANSKY

DICE (continued)

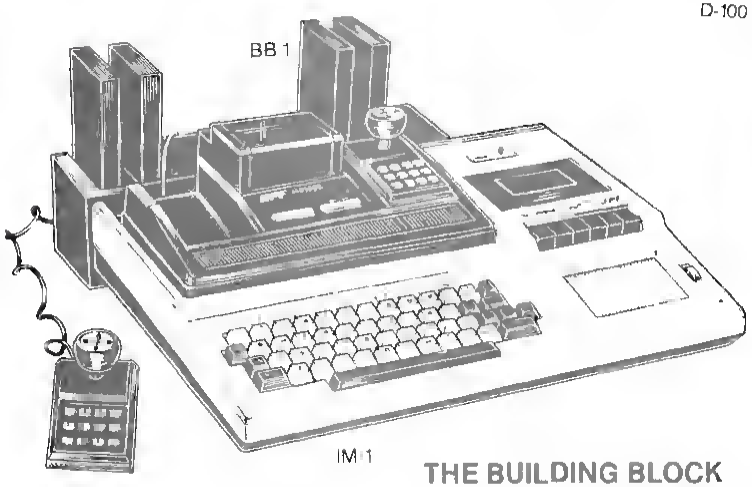
```
50  CALL 17056
60 C= INT (6* RND (1)+1):D= INT (6* RND (1)+1)
70 W=C+D
80  COLOR =4: SHAPE =15
90  PLOT 3,5
100  FOR X=3 TO 9
110  FOR Y=5 TO 11
120  PLOT X,Y
130  NEXT X
140  NEXT Y
145  COLOR =4: SHAPE =15
150  PLOT 22,5
155  FOR X=22 TO 28
160  FOR Y=5 TO 11
165  PLOT X,Y
170  NEXT X
175  NEXT Y
180  IF C=1 THEN  COLOR =6: SHAPE =0: PLOT 6,8
185  IF D=1 THEN  COLOR =6: SHAPE =0: PLOT 25,8
190  IF C=2 THEN  COLOR =6: SHAPE =0: PLOT 4,6: PLOT 8,10
195  IF D=2 THEN  COLOR =6: SHAPE =0: PLOT 23,6: PLOT 27,10
200  IF C=3 THEN  COLOR =6: SHAPE =0: PLOT 4,6: PLOT 6,8: PLOT 8,10
205  IF D=3 THEN  COLOR =6: SHAPE =0: PLOT 23,6: PLOT 25,8: PLOT 27,10
210  IF C=4 THEN  COLOR =6: SHAPE =0: PLOT 4,6: PLOT 8,6: PLOT 4,10: PLOT 8,10
215  IF D=4 THEN  COLOR =6: SHAPE =0: PLOT 23,6: PLOT 27,6: PLOT 23,10: PLOT 27,
10
220  IF C=5 THEN  COLOR =6: SHAPE =0: PLOT 4,6: PLOT 8,6: PLOT 6,8: PLOT 4,10: P
LOT 8,10
225  IF D=5 THEN  COLOR =6: SHAPE =0: PLOT 23,6: PLOT 27,6: PLOT 25,8: PLOT 23,1
0: PLOT 27,10
230  IF D=6 THEN  COLOR =6: SHAPE =0: PLOT 4,6: PLOT 8,6: PLOT 4,8: PLOT 8,8: PL
OT 4,10: PLOT 8,10
235  IF D=6 THEN  COLOR =6: SHAPE =0: PLOT 23,6: PLOT 27,6: PLOT 23,8: PLOT 27,8
: PLOT 23,10: PLOT 27,10
245  IF W=7 PRINT "WINNER!!!": GOTO 450
250  IF W=11 PRINT "WINNER!!!": GOTO 450
255  IF W=2 PRINT "SNAKE EYES, YOU LOSE!!!": GOTO 475
260  IF W=12 PRINT "BOX CARS, YOU LOSE!!!": GOTO 475
265  GOTO 495
270  CALL 17046
280  PRINT "POINT IS ",W
285 A= INT (6X RND (1)+1):B= INT (6* RND (1)+1)
290 D=A+B
295  COLOR =4: SHAPE =15
300  PLOT 3,5
```

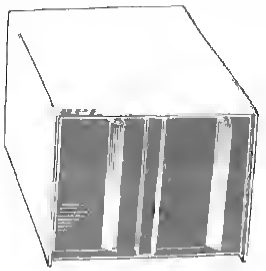
DICE (continued)

```
305  FOR X=3 TO 9
310  FOR Y=5 TO 11
315  PLOT X,Y
320  NEXT X
325  NEXT Y
330  COLOR R=4: SHAPE =15
335  PLOT 22,5
340  FOR X=22 TO 28
345  FOR Y=5 TO 11
350  PLOT X,Y
355  NEXT X
360  NEXT Y
365  IF A=1 THEN  COLOR =6: SHAPE =0: PLOT 6,8
370  IF B=1 THEN  COLOR =6: SHAPE =0: PLOT 25,8
375  IF A=2 THEN  COLOR =6: SHAPE =0: PLOT 4,6: PLOT 8,10
380  IF B=2 THEN  COLOR =6: SHAPE =0: PLOT 23,6: PLOT 27,10
385  IF A=3 THEN  COLOR =6: SHAPE =0: PLOT 4,6: PLOT 6,8: PLOT 8,10
390  IF B=3 THEN  COLOR =6: SHAPE =0: PLOT 23,6: PLOT 25,8: PLOT 27,10
400  IF B=4 THEN  COLOR =6: SHAPE =0: PLOT 23,6: PLOT 27,6: PLOT 23,10: PLOT 27,
10
405  IF A=5 THEN  COLOR =6: SHAPE =0: PLOT 4,6: PLOT 8,6: PLOT L6,8: PLOT 4,10:
PLOT 8.10
410  IF B=5 THEN C COLOR =6: SHAPE =0: PLOT 23,6: PLOT 27,6: PLOT 25,8: PLOT 23,
10: PLOT 27,10
415  IF A=6 THEN  COLOR =6: SHAPE =0: PLOT 4,6: PLOT 8,6: PLOT 4,8: PLOT 8,8: PL
OT 4,10: PLOT 8,10
420  IF B=6 THEN  COLOR =6: SHAPE =0: PLOT 23,6: PLOT 27,6: PLOT KK23,8: PLOT 23
,10: PLOT 27,10
425  IF D=W THEN  PRINT "WINNER!!!": GOTO 450
430  IF D=7 THEN  PRINT "YOU CRAPPED OUT!!!": GOTO 475
435  IF D=11 THEN  PRINT "YOU CRAPPED OUT!!!": GOTO 475
445  GOTO 495
450  MUSIC "10305*10   50*100000"460 GOTO 520
475  MUSIC "7*615000"
485  GOTO 520
495  INPUT "NEXT ROLL, TYPE (1) THEN RETURN"; Z
500  IF Z=1 THEN  GOTO 270
520  INPUT "NEW ROLL, TYPE (5) THEN RETURN"; F
525  IF F=5 THEN  GOTO 50
2400  PRINT "POINT IS",W
```

PERIPHERALS ARE NOW IN STOCK
MAY 15, 82

APF APF APF





MINI-FLOPPY DISK DRIVE (D-100)

Each APF mini-floppy disk drive gives you 72,000 bytes of additional storage capacity plus loading and accessing of data within seconds. Industry standard mini-floppy connections

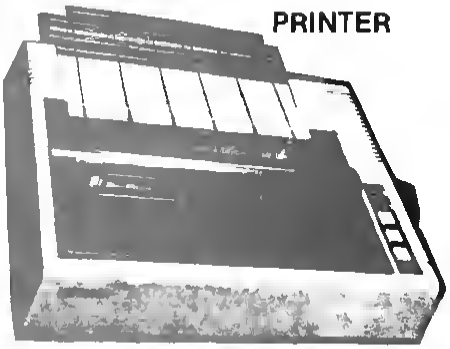
THE IMAGINATION MACHINE (IM-1)

Exciting, personal, home computer for home management, entertainment and education. User-programmable in BASIC or uses APF software cassette programs. Features 9K RAM, 14K ROM, 53-key keyboard, 32 characters x 16 line screen format, alpha numerics in up to 8 colors. Built-in sound synthesizer, built in tape deck, 2 game style hand held controllers

THE BUILDING BLOCK (BB-1) NOW IN STOCK

This expansion device lets you use your APF Imagination Machine to its fullest degree. Easily plugged into the machine and requiring no additional power supply, it contains four universally adaptable ports for peripheral drive cartridges. For example, a carfridge * enabling hookup to any standard printer or telephone modem. Ports can also hold cartridges for 8K RAM * memory and mini floppy disk drive

PRINTER



The EPSON MX

The MX-80, shown above, is an 80-column bidirectional printer featuring the full 96-character ASCII set with descenders for easier reading, and offers a user-defined choice of 40, 66, 80 or 132 columns.

One of the biggest breakthroughs offered by the MX-80 is the world's first disposable print head. After its 50-million-character life expectancy, you simply buy a new one for under $30 and replace it yourself in seconds.

TELEPHONE MODEM (TM-150)

The APF modem (modulator/demodulator) allows you to hook up the computer to a remote terminal over telephone lines and access time sharing services or trade programs with a compatible computer

TM-150

PROTECTO ENTERPRIZES (FACTORY DIRECT RELIABILITY)

BOX 550, BARRINGTON, ILLINOIS 60010 — Phone 312/382-5244 to order

MM1191

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12 HOUR CLOCK
.....from DEAN MCKITRICK OF W. VIRGINIA

If time needs to be slowed down or speeded up, change the pause loop at line 50 >125 to slow down and < 125 to speed up. However change it one at a time.

```
5  CALL 17046
10  POKE 24578,52
15  INPUT "THE HOUR IS ",E
20 F= INT (E/10):E=E-(F*10)
25  INPUT "THE MIUTES ARE ",C
30 D= INT (C/10):C=C-(D*10)
35  INPUT "THE SECONDS ARE ",A
40 B= INT (A/10):A=A-(B*10)
45  CALL 17046
50  FOR N=1 TO 125: NEXT N
55 A=A+1
60  IF A>9 THEN 70
65  GOTO 180
70 A=0
75 B=B+1
80  IF B>5 THEN 90
85  GOTO 180
90 B=0
95 C=C+1
100  IF C>9 THEN 110
105  GOTO 180
110 C=0
115 D=D+1
120  IF D>5 THEN 130
125  GOTO 180
130 D=0
135 E=E+1
140  IF E>9 THEN 150
145  GOTO 160
150 E=0
155 F=F+1
160  IF F=1 THEN 175
165  GOTO 180
170 B=0:C=0:D=0:E=1:F=0
175  IF E=3 THEN A=0:B=0:C=0:D=0:E=1:F=0
180 X=1:Y=14:Z=X*32+Y+512
185  POKE 40960,Z/256
190  POKE 40961,Z- INT (Z/256)+256
195  PRINT F;E;":";D;C;":";B;A: GOTO 50
```